

Rosemount™ 3300 Level Transmitter

Guided Wave Radar



1 Product certifications

Rev 4.25

1.1 European directive information

A copy of the EU Declaration of Conformity can be found at the end of the document. The most recent revision of the EU Declaration of Conformity can be found at Emerson.com/Rosemount.

1.2 Ordinary location certification

As standard, the transmitter has been examined and tested to determine that the design meets the basic electrical, mechanical, and fire protection requirements by a nationally recognized test laboratory (NRTL) as accredited by the Federal Occupational Safety and Health Administration (OSHA).

Pollution Degree: 2

Overvoltage Category: II

In Canada: The power to this equipment must be supplied by a source that is categorized as “CLASS 2” and “SELV” as specified in the Canadian Electrical Code, C22.1 and the National Electrical Code NFPA 70.

1.3 Installing equipment in North America

The US National Electrical Code® (NEC) and the Canadian Electrical Code (CEC) permit the use of Division marked equipment in Zones and Zone marked equipment in Divisions. The markings must be suitable for the area classification, gas, and temperature class. This information is clearly defined in the respective codes.

1.4 USA

1.4.1 E5 Explosionproof (XP), Dust-Ignitionproof (DIP)

Certificate	FM 3013394
Standards	FM Class 3600 – 2011; FM Class 3610 – 2010; FM Class 3611 – 2004; FM Class 3615 – 2006; FM Class 3810 – 2005; ANSI/ISA 60079-0 – 2009; ANSI/ISA 60079-11 – 2009; ANSI/NEMA 250 – 1991; ANSI/IEC 60529 – 2004
Markings	XP CL I, DIV 1, GP B, C, D; DIP CLII/III, DIV 1, GP E, F, G; T5 Ta=85°C; Type 4X/IP66

Specific Conditions for Safe Use (X):

1. Potential Electrostatic Charging Hazard – The enclosure contains non-metallic material. To prevent the risk for electrostatic sparking the plastic surface should only be cleaned with a damp cloth.
2. WARNING – The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

1.4.2 15 Intrinsic Safety (IS), Nonincendive (NI)

Certificate	FM 3013394
Standards	FM Class 3600 – 2011; FM Class 3610 – 2010; FM Class 3611 – 2004; FM Class 3615 – 2006; FM Class 3810 – 2005; ANSI/ISA 60079-0 – 2009; ANSI/ISA 60079-11 – 2009; ANSI/NEMA 250 – 1991; ANSI/IEC 60529 – 2004
Markings	IS CL I, DIV 1, GP A, B, C, D, E, F, G in accordance with control drawing 9150077-944; IS (Entity) CL I, Zone 0, AEx IA IIC T4 in accordance with control drawing 9150077-944, NI CL I, DIV 2, GP A, B, C, D, T4a Ta=70 °C; Suitable for use in CL II/III DIV 2, GP A, B, C, D, T4a Ta=70 °C; Type 4X/IP66

Specific Conditions for Safe Use (X):

1. Potential Electrostatic Charging Hazard – The enclosure contains non-metallic material. To prevent the risk for electrostatic sparking the plastic surface should only be cleaned with a damp cloth.
2. WARNING – The apparatus enclosure contains aluminum and is considered to constitute a potential risk of ignition by impact or friction. Care must be taken into account during installation and use to prevent impact or friction.

	U_i	I_i	P_i	C_i	L_i
Entity parameters HART	30 V	130 mA	1 W	0 nF	0 mH

1.5 Canada

1.5.1 E6 Explosionproof, Dust-Ignitionproof

Certificate	CSA02CA1250250X
Standards	CSA C22.2 No.0-M91, CSA C22.2 No.25-1966 (R2009), CSA C22.2 No.30-M1986 (R2012), CSA C22.2 No.94-M91, CSA C22.2 No.142-M1987, CAN/CSA-C22.2 No.

60079-0:15, CAN/CSA-C22.2 No. 60079-11:14, CSA C22.2 No. 213-M1987 (R2013), CAN/CSA C22.2 No. 60529:05

Markings

CL I, Div.1, GP C, D;

CL II, Div.1 & 2, GP G & COAL DUST;

CL III, Div.1 T4, MAX. AMB. TEMP. +85°C

HAZ. LOC. CL I, Div.2, GP A, B, C, D

T4, MAX. AMB. TEMP. +70°C

In ambient temperatures above 60 °C, use wire or cable rated for 90 °C minimum.

À des températures ambiantes supérieures à 60 °C, utilisez un fil ou un câble conçu pour 90 °C minimum.

Specific Conditions for Safe Use (X):

1. The enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in zone 0.
2. The probes may contain plastic materials greater than 4cm² or be coated with plastic and these can present an electrostatic risk if rubbed or placed in a fast moving air flow.
3. The probes may contain light alloys which can present a risk from frictional ignitions. Care should be taken to protect them from mechanical impact or friction during use or installation.

1.5.2 I6 Intrinsically Safe and Non-Incendive Systems

Certificate

CSA02CA1250250X

Standards

CSA C22.2 No.0-M91, CSA C22.2 No.25-1966 (R2009), CSA C22.2 No.30-M1986 (R2012), CSA C22.2 No.94-M91, CSA C22.2 No.142-M1987, CAN/CSA-C22.2 No. 60079-0:15, CAN/CSA-C22.2 No. 60079-11:14, CSA C22.2 No. 213-M1987 (R2013), CAN/CSA C22.2 No. 60529:05

Markings

CL I, DIV 1, GP A, B, C, D, T4 see installation drawing 9150077-945; Non-Incendive Class III, DIV 1, Haz-loc CL I DIV 2, GP A, B, C, D, Maximum Ambient Temperature +70 °C, T4, Type 4X/IP66

Specific Conditions for Safe Use (X):

1. The equipment is not capable of withstanding the 500V test as defined in EN 60079-11. This must be considered in any installation.
2. The enclosure may be made of aluminum alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in zone 0.
3. The probes may contain plastic materials greater than 4cm² or be coated with plastic and these can present an electrostatic risk if rubbed or placed in a fast moving air flow.
4. The probes may contain light alloys which can present a risk from frictional ignitions. Care should be taken to protect them from mechanical impact or friction during use or installation.

1.6 Europe**1.6.1 E1 ATEX Flameproof**

Certificate	KEMA 01ATEX2220X
Standards	EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-11:2012, EN 60079-26:2015, IEC 60079-26:2021, EN 60079-31:2014
Markings	<p>⊕II 1/2 G Ex ia IIC T6...T1 Ga / Ex db [ia Ga] IIC T6...T1 Gb</p> <p>II 1/2 D Ex ia IIIC T₂₀₀ 85 °C...T₂₀₀ 450 °C Da / Ex tb [ia Da] IIIC T85 °C...T450 °C Db</p> <p>II 2 D Ex tb IIIC T85 °C...T135 °C Db</p>
Ambient temperature range	-50 °C to +75 °C -40 °C to +75 °C with a minimum process temperature of -196 °C

Specific Conditions for Safe Use (X):

1. On application of the transmitter with plastic covered probes, in an explosive gas atmosphere, precaution shall be taken to avoid danger of ignition due to electrostatic charges on the probe.
2. On application of the transmitter in an explosive dust atmosphere, the transmitter shall be installed in such a way that the risk from the electrostatic discharges and propagating brush discharges caused by rapid flow of dust at the label is avoided.
3. For probes and flanges containing light metals, an ignition hazard due to impact or friction needs to be avoided according to EN 60079-0 clause 8.3, when used as EPL Ga/Gb equipment.

4. Conditions which may adversely affect the material of the partition wall shall be avoided, see instructions for details.

Temperature class / Maximum surface temperature	Maximum process temperature	Maximum ambient temperature
T6 / T 85 °C	+75 °C	+75 °C
T5 / T 100 °C	+ 90 °C	+75 °C
T4 / T 135 °C	+125 °C	+75 °C
T3 / T 200 °C	+ 190 °C	+75 °C
T2 / T 300 °C	+285 °C	+65 °C
T1 / T 450 °C	+ 400 °C	+55 °C

1.6.2 I1 ATEX Intrinsic Safety

Certificate BAS02ATEX1163X

Standards EN IEC 60079-0:2018, EN 60079-11:2012

Markings  II 1G Ex ia IIC T4 Ga (-50°C ≤ Ta ≤ +70°C)

Specific Conditions for Safe Use (X):

1. The equipment is not capable of withstanding the 500V test as defined in EN60079-11. This must be considered in any installation.
2. The enclosure is made of aluminium alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in zone 0.
3. The probes may contain plastic materials greater than 4cm² or be coated with plastic and these can present an electrostatic risk if rubbed or placed in a fast moving air flow.
4. The probes may contain light alloys which can present a risk from frictional ignitions. Care should be taken to protect them from mechanical impact during use or installation.

	U _i	I _i	P _i	C _i	L _i
Entity parameters HART	30 V	130 mA	1 W	0 nF	0 mH

1.7 International

1.7.1 E7 IECEx Flameproof

Certificate	IECEx DEK 12.0015X
Standards	IEC 60079-0:2017, IEC 60079-1:2014, IEC 60079-11:2011; IEC 60079-26:2021, IEC 60079-31:2013
Markings	Ex ia IIC T6...T1 Ga / Ex db [ia Ga] IIC T6...T1 Gb Ex ia IIIC T ₂₀₀ 85 °C...T ₂₀₀ 450 °C Da / Ex tb [ia Da] IIIC T85 °C...T450 °C Db Ex tb IIIC T85 °C...T135 °C Db
Ambient temperature range	-50 °C to +75 °C -40 °C to +75 °C with a minimum process temperature of -196 °C

Specific Conditions for Safe Use (X):

1. On application of the transmitter with plastic covered probes, in an explosive gas atmosphere, precaution shall be taken to avoid danger of ignition due to electrostatic charges on the probe.
2. On application of the transmitter in an explosive dust atmosphere, the transmitter shall be installed in such a way that the risk from electrostatic discharges and propagating brush discharges caused by rapid flow of dust at the label is avoided.
3. For probes and flanges containing light metals, an ignition hazard due to impact or friction needs to be avoided according to IEC 60079-0 clause 8.3, when used as EPL Ga/Gb equipment.
4. Conditions which may adversely affect the material of the partition wall shall be avoided, see instructions for details.

Temperature class / Maximum surface temperature	Maximum process temperature	Maximum ambient temperature
T6 / T 85 °C	+75 °C	+75 °C
T5 / T 100 °C	+90 °C	+75 °C
T4 / T 135 °C	+125 °C	+75 °C
T3 / T 200 °C	+190 °C	+75 °C
T2 / T 300 °C	+285 °C	+65 °C
T1 / T 450 °C	+400 °C	+55 °C

1.7.2 I7 IECEx Intrinsic Safety

- Certificate** IECEx BAS 12.0062X
- Standards** IEC 60079-0:2017, IEC 60079-11:2011
- Markings** Ex ia IIC T4 Ga (-50°C ≤ Ta ≤ +70°C)

Specific Conditions for Safe Use (X):

1. The equipment is not capable of withstanding the 500V test as defined in EN60079-11. This must be considered in any installation.
2. The enclosure is made of aluminium alloy and given a protective polyurethane paint finish; however, care should be taken to protect it from impact or abrasion if located in zone 0.
3. The probes may contain plastic materials greater than 4cm² or be coated with plastic and these can present an electrostatic risk if rubbed or placed in a fast moving air flow.
4. The probes may contain light alloys which can present a risk from frictional ignitions. Care should be taken to protect them from mechanical impact during use or installation.

	U _i	I _i	P _i	C _i	L _i
Entity parameters	30 V	130 mA	1 W	0 nF	0 mH

1.8 Brazil

1.8.1 E2 INMETRO Flameproof

- Certificate** UL-BR-17.0192X
- Standards** ABNT NBR IEC 60079-0:2020, ABNT NBR IEC 60079-1:2016, ABNT NBR IEC 60079-11:2013, ABNT NBR IEC 60079-26:2016, ABNT NBR IEC 60079-31:2014
- Markings** Ex db [ia Ga] IIC T6...T1 Ga/Gb
Ex tb [ia Da] IIIC T85 °C...T450 °C Da/Db
Ex tb IIIC T85 °C...T135 °C Db

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

1.8.2 I2 INMETRO Intrinsic Safety

Certificate	UL-BR-17.0198X
Standards	ABNT NBR IEC 60079-0:2020, ABNT NBR IEC 60079-11:2011
Markings	Ex ia IIC T4 Ga (- 50°C ≤ Tamb ≤ + 70°C)

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

	U _i	I _i	P _i	C _i	L _i
Entity parameters	30 V	130 mA	1 W	0 nF	0 mH

1.9 China

1.9.1 E3 China Flameproof

Certificate	GYJ21.1303X
Standards	GB 3836.1-2010, GB 3836.2-2010, GB 3836.4-2010, GB 3836-20-2010, GB 12476.1-2013, GB 12476.4-2010, GB 12476.5-2013
Markings	Ex ia IIC T6-T1 Ga/Ex d [ia Ga] IIC T6-T1 Gb, Ex iaD 20 T ₂₀₀ 85°C~T ₂₀₀ 450°C/ Ex tD [iaD 20] A21 IP6X T85°C~450°C, Ex tD A21 IP6X T85°C~T135°C

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

1.9.2 I3 China Intrinsic Safety

Certificate	GYJ21.1302X
Standards	GB 3836.1-2010, GB 3836.4-2010, GB 3836.20-2010
Markings	Ex ia IIC T4 (-50°C ≤ Ta ≤ +70°C),

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

	U _i	I _i	P _i	C _i	L _i
Entity parameters	30 V	130 mA	1 W	0 nF	0 mH

1.10 Technical Regulations Customs Union (EAC)

TR CU 020/2011 “Electromagnetic Compatibility of Technical Products”

TR CU 032/2013 “On safety of equipment and vessels under pressure”

Certificate EAЭC RU C-US.AД07.B.00770/19

TR CU 012/2011 “On safety of equipment intended for use in explosive atmospheres”

1.10.1 EM Technical Regulations Customs Union (EAC) Flameproof

Certificate EAЭC RU C-SE.AA87.B.00620-21

Markings Ga/Gb Ex d [ia Ga] IIC T6...T1 X
Ex tb [ia Da] IIIC T85 °C...T450 °C Db X
Ex tb IIIC T85 °C...T135 °C Db X

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

1.10.2 IM Technical Regulations Customs Union (EAC) Intrinsic Safety

Certificate EAЭC RU C-SE.AA87.B.00620-21

Markings 0Ex ia IIC T4 Ga X -50°C ≤ Ta ≤ +70°C

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

	U _i	I _i	P _i	C _i	L _i
Entity parameters	30 V	130 mA	1 W	0 nF	0 mH

1.11 Japan

1.11.1 E4 Japan Flameproof

Certificate CML 20JPN1218X

Markings Ex db [ia Ga] IIC T6...T1 Ga/Gb

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

1.12 India

1.12.1 EW Flameproof

Certificate P5411191/1

Markings Ex ia IIC T6..T1 Ga / Ex db [ia Ga] IIC T6.. T1 Gb

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

1.12.2 IW Intrinsic Safety

Certificate P537989/1

Markings Ex ia IIC T4 Ga

Specific Conditions for Safe Use (X):

1. See certificate for Specific Conditions.

1.13 United Arab Emirates

1.13.1 Flame-proof

Certificate 20-11-28736/Q20-11-001012

Markings Same as IECEx (E7)

1.13.2 Intrinsic Safety

Certificate 20-11-28736/Q20-11-001012

Markings Same as IECEx (I7)

1.14 Combinations

KB Combination of E5 and E6

1.15 Additional certifications

1.15.1 U1 Overfill prevention

Certificate Z-65.16-416

Application TÜV tested and approved by DIBt for overfill prevention according to the German WHG regulations.

1.16 Pattern approval

GOST Belarus

Certificate RB-03 07 2765 10

GOST Kazakhstan

Certificate KZ.02.02.03473-2013

GOST Russia

Certificate SE.C.29.010.A

GOST Uzbekistan

Certificate 02.2977-14

China Pattern Approval

Certificate 2009-L256

1.17 Conduit plugs and adapters

IECEX Flameproof and Increased Safety

Certificate IECEX UL 18.0016X

Standards IEC 60079-0:2017, IEC 60079-1:2014-06, IEC 60079-7:2017, IEC 60079-31:2013

Markings Ex db eb IIC Gb;
Ex ta IIIC Da

ATEX Flameproof and Increased Safety

Certificate DEMKO 18 ATEX 1986X

Standards EN IEC 60079-0:2018, EN 60079-1:2014, EN 60079-7:2015 +A1:2018, EN 60079-31:2014



Markings  II 2 G Ex db eb IIC Gb;
 II 1 D Ex ta IIIC Da

Table 1-1: Conduit Plug Thread Sizes

Thread	Identification mark
M20x1.5-6g	M20
½ - 14 NPT	½ NPT

Table 1-2: Thread Adapter Thread Sizes

Male thread	Identification mark
M20 x 1.5 – 6g	M20
½- 14 NPT	½ - 14 NPT
Female thread	Identification mark
M20 x 1.5 – 6H	M20
½ - 14 NPT	½ - 14 NPT

Specific Conditions for Safe Use (X):

1. The Blanking Elements shall not be used with an adapter.
2. Only one adapter shall be used with any single cable entry on the associated equipment.
3. It is the end user's responsibility to ensure that the ingress protection rating is maintained at the interface of the equipment and the blanking element/adapter.
4. Suitability of the temperature of the devices is to be determined during end-use with suitably rated equipment.
5. The Ex Blanking Elements have been evaluated for use in an ambient temperature range of -60 °C to +125 °C.

1.18 Installation drawings

Figure 1-1: 9150077-944 - System Control Drawing

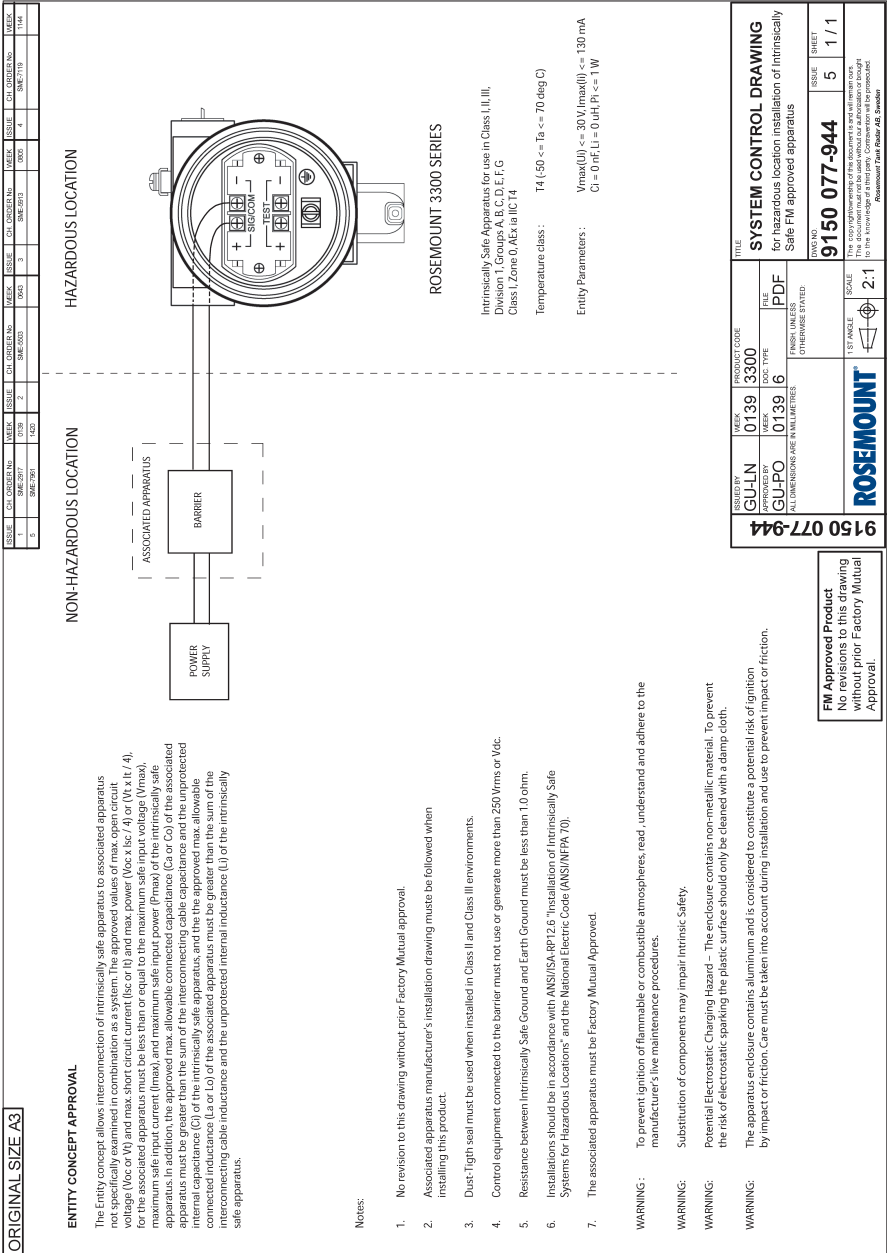
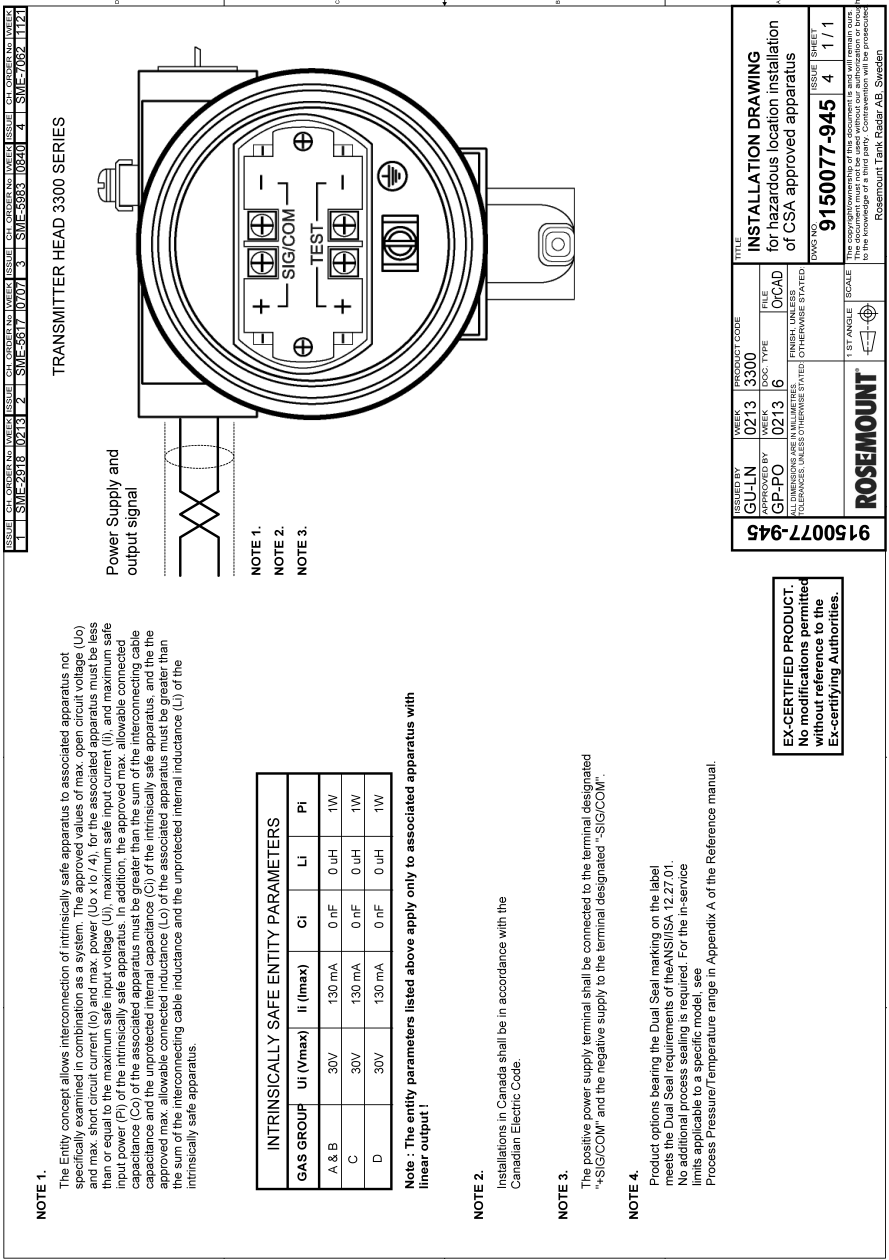


Figure 1-2: 9150077-945 Installation Drawing



1.19 EU Declaration of Conformity

Figure 1-3: EU Declaration of Conformity




EU Declaration of Conformity

No: 3300

We,

Rosemount Tank Radar AB
Layoutvägen 1
S-435 33 MÖLNLYCKE
Sweden

declare under our sole responsibility that the product,

Rosemount 3300 Series Guided Wave Radar Level and Interface Transmitter

manufactured by,

Rosemount Tank Radar AB
Layoutvägen 1
S-435 33 MÖLNLYCKE
Sweden

is in conformity with the provisions of the European Community Directives, including the latest amendments, as shown in the attached schedule.

Presumption of conformity is based on the application of the harmonized standards, normative documents or other documents and, when applicable or required, a European Community notified body certification, as shown in attached schedule.



(signature)

Dajana Prastalo
(name - printed)

Manager Product Approvals

(function name - printed)

2021-06-23
(date of issue)



**Schedule
No: 3300**

EMC Directive (2014/30/EU)

EN 61326-1:2013

ATEX Directive (2014/34/EU)

BAS02ATEX1163X

Intrinsic Safety

Group II, Category 1 G, Ex ia IIC T4 Ga

EN IEC 60079-0:2018; EN 60079-11:2012

KEMA 01ATEX2220X

Flameproof

Group II, Category 1/2 G Ex ia IIC T6...T1 Ga/Ex db[ja Ga] IIC T6..T1 Gb

Group II, Category 1/2 D Ex ia IIIC T200T85°C...T200450°C Da/Ex tb[ja Da] IIIC T85°C...T450°C Db

Group II, Category 2 D Ex tb IIIC T85°C...T135°C Db

EN IEC 60079-0:2018; EN 60079-1:2014; EN 60079-11:2012; EN 60079-26:2015; IEC 60079-26:2021; EN 60079-31:2014

Baseefa12ATEX0089X

Type of protection N, Non-sparking and Intrinsic Safety

Group II, Category 3 G, Ex ic nA IIC T4 Gc

EN IEC 60079-0:2018; EN 60079-11:2012; EN 60079-15:2010



Schedule
No: 3300

ATEX Notified Body for EU Type Examination Certificates and Type Examination Certificates

Notified Body responsible before March 2019
SGS Baseefa Ltd [Notified Body Number: 1180]
Rockhead Business Park, Staden Lane
Buxton, Derbyshire SK17 9RZ
United Kingdom

Notified Body responsible after March 2019
SGS Fimko Oy [Notified Body Number: 0598]
Särkiniementie 3
P.O. Box 30
FI-00211, Helsinki
Finland

DEKRA (formerly **KEMA**) **Quality B.V.** [Notified Body Number: 0344]
Utrechtsweg 310
6812 AR Arnhem
Netherlands

ATEX Notified Body for Quality Assurance

DNV Nemko Presafe AS [Notified Body Number: 2460]
Veritasveien 1
1322 HØVIK
Norway

1.20 China RoHS

List of Model Parts with China RoHS Concentration above MCVs
含有China RoHS管控物质超过最大浓度限值的部件型号列表

Part Name 部件名称	Hazardous Substances / 有害物质					
	Lead 铅 (Pb)	Mercury 汞 (Hg)	Cadmium 镉 (Cd)	Hexavalent Chromium 六价铬 (Cr +6)	Polybrominated biphenyls 多溴联苯 (PBB)	Polybrominated diphenyl ethers 多溴联苯醚(PBDE)
Electronics Assembly 电子组件	X	O	O	O	O	O
Housing Assembly 壳体组件	O	O	O	O	O	O

This table is proposed in accordance with the provision of SJ/T11364

本表格系依据SJ/T11364的规定而制作。

O: Indicate that said hazardous substance in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572.

O: 意为该部件的所有均质材料中该有害物质的含量均低于GB/T 26572所规定的限量要求。

X: Indicate that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572.

X: 意为在该部件使用的所有均质材料里，至少有一类均质材料中该有害物质的含量高于GB/T 26572所规定的限量要求。



Product Certifications
00880-0100-4811, Rev. AA
November 2022

For more information: [Emerson.com](https://www.emerson.com)

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